

Notice of Allowability

Application No.

10/035,355

Examiner

Luan Thai

Applicant(s)

FARNWORTH ET AL.

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed March 03, 2003.
2. ☒ The allowed claim(s) is/are 1-31 (renumbered as 1-8, 10-13, 9, and 14-31, respectively).
3. ☒ The drawings filed on 04 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. <u>5</u> . | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9 <input type="checkbox"/> Other |

DETAILED ACTION

This Office action is responsive to the amendment filed on March 03, 2003.

Claims 32-54 are canceled.

Claims 1-31 are pending in this application.

1. Claims 1-31 are allowed and renumbered as 1-8, 10-13, 9, and 14-31, respectively.
2. The following is an examiner's statement of reasons for allowance: the prior art taken either singly or in combination fails to anticipate or fairly suggest that which the Applicant claims in independent claims 1, 4-5, 9-10, 14, 19, and 26, in a manner which would warrant a rejection under 35 U.S.C. § 102 or 35 U.S.C. § 103.

The best prior art of record, U.S. Patent No. 5,484,647 to Nakatani et al, teaches (see specifically figures 1A-1C, 2A-2D, Col. 13, lines 60+, Col. 14, lines 1+) a method for fabrication an interconnect for semiconductor components comprising: providing a substrate 102 having a first side and an opposing second side; forming first and second electrically insulating layers 101 on the first and second sides of the substrate 102; forming an opening 103 through the substrate by using a laser beam; forming a conductive member 104 in the lasered opening 103; forming first and second external contacts 106 on the first and second sides of the substrate in communication with the conductive member 104. Nakatani et al, however, fail to teach or render obvious: a) a contact formed on a side of the

substrate, forming an opening in the contact, directing a laser beam through the opening and at the substrate without touching the contact to form a lasered opening through the substrate, as recited in claims 1, 5, 14, and 26; b) forming a conductive member in the lasered opening having a first enlarged terminal portion and a second enlarged terminal portion, and forming a first and a second external contacts on the first and the second enlarged terminal portions, respectively, as recited in claims 4 and 9; c) forming an opening in a contact that is formed on the substrate, directing a laser beam at the opening and through the substrate to laser drill a via aligned with the opening, forming a first external contact on the first side comprising a first concave segment of the conductive member, and forming a second external contact on the second side comprising a second concave segment of the conductive member, as recited in claim 10; and d) forming an opening in a contact that is formed on the substrate, forming a first non-oxidizing layer on the first terminal portion and on the first electrical insulating layer, forming a second non-oxidizing layer on the second terminal portion and on the second electrically insulating layer, as recited in claim 19; especially when these limitations are considered within the specific combination claimed.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luan Thai whose telephone number is (703) 308-1211. The examiner can normally be reached on 7:00 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (703) 305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Luan Thai
March 4, 2003



DAVID L. TALBOTT
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